

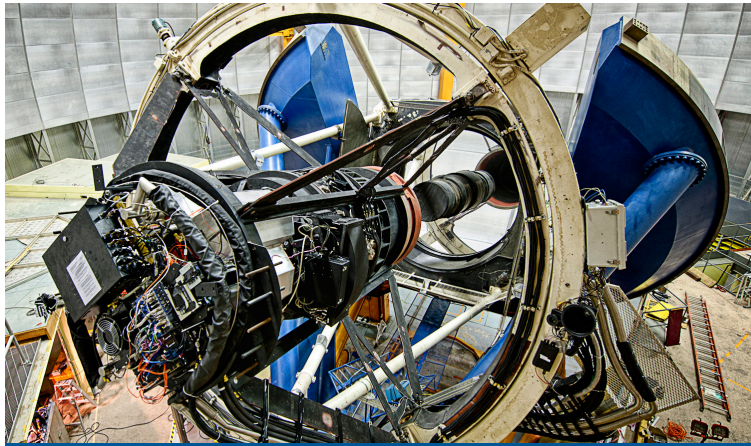
Dark Energy Camera

Scientists use this remarkable new device to capture pictures of ancient starlight from billions of light years away.

What is the Dark Energy Camera?

The Dark Energy Camera is the world's most powerful digital camera. Built at Fermilab and mounted on a telescope in the Andes Mountains in Chile, the camera can see light from billions of light years away. Though only about the size of a phone booth, the camera will allow scientists to create the most detailed galaxy maps ever attempted.

The Dark Energy Camera is the main instrument that will be used in the Dark Energy Survey, a five-year project to map one-eighth of the southern sky.



The Dark Energy Camera mounted on the 4-meter Blanco Telescope at the Cerro Tololo Inter-American Observatory in Chile.

What are we looking for?

As the name implies, the Dark Energy Survey will hopefully help us understand the force we call Dark Energy. Scientists have discovered that the universe is expanding faster and faster. Gravity should cause that expansion to slow, but instead it's speeding up. The Dark Energy Survey will help us understand why. The answer is likely to change our understanding of the forces, including gravity, that cause everything in the universe to interact.



One of the first images taken with the Dark Energy Camera, of the barred spiral galaxy NGC 1365, which is 60 million light years from Earth.

By the numbers

The Dark Energy Camera's resolution is 570 megapixels, or 570 million pixels.

It can see light from up to 8 billion light years away.

It will capture more than 100,000 galaxies in each snapshot.

The camera's first pictures were taken on Sept. 12, 2012.

The Dark Energy Survey is a collaborative effort between scientists at 29 institutions in seven countries.

Over the course of five years, it will record information on 300 million galaxies, 100,000 galaxy clusters and 4,000 supernovae.

For more information, visit www.darkenergysurvey.org. To see the first images from the camera, go to <http://1.usa.gov/PLPFDQ>.



This photo of the Cerro Tololo Inter-American Observatory in Chile was made by overlaying dozens of photographs atop one another.